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SHORTER NOTES

***Psilotum nudum* New to Arkansas.**—The pantropical pteridophyte *Psilotum nudum* (L.) P. Beauv. is distributed in the United States across the Atlantic Coastal Plain from Florida to North Carolina (Perry and Musselman, Amer. Fern J. 84:102–104, 1994), across the Gulf Coastal Plain from Florida to Texas (Lodwick, Amer. Fern J. 65:62, 1975), and disjunctly in Arizona (Thieret, Flora of North America 2:16–17, 1993). Three populations, one natural and two adventive, were discovered recently in Arkansas. In the U.S., these populations are most distant from oceanic moderation and most exposed to interior continental climate. They extend the species' range northward 200 km from reported populations in Texas and Louisiana (Rhodes, Sida 3:525, 1970). The populations are suggestive that other populations might be located in the southern half of Arkansas, and perhaps in other northerly locations in the Southeastern United States.

In autumn of 1992, the first Arkansas population was noticed while doing yardwork. The population was located within Arkadelphia, Clark County, by Dennis McMasters. While raking, he located a single stem that was sheltered by a rock retaining wall and by a thick covering of English ivy. It was protected on all sides from direct sunlight, and was observed for three years before a voucher was removed (*McMasters 95001,* HSU). Preliminary observations were reported (Bray et al., Proc. Arkansas Acad. Sci., 48:239–241, 1994). In autumn of 1993, two stems were observed; in autumn of 1994, three stems were observed, each 10 cm tall, thrice branched, etiolated by shade, and sterile. The population most probably originated from horticultural soil or mulch to improve landscaping. The McMasters family was involved in the greenhouse business in Arkadelphia, but did not sell *Psilotum.* The Henderson State University (HSU) campus, 1.5 km away, has a greenhouse with *Psilotum.* Thus, the population is probably adventive and may have arisen as a waif or escape from a local source; alternatively, it might have been introduced with landscaping materials trucked northward to Arkadelphia from nurseries to the south. This population is 200 km north of the nearest population in Texas or Louisiana; it has been observed now in four growing seasons, suggesting it is well established. It remains to be seen whether it can reproduce and become naturalized.

On February 12, 1994, a natural population was discovered by the senior author at the edge of a *Nyssa aquatica/Taxodium distichum* swamp adjacent to a gravel timber access road bordering an impoundment in extreme southern Arkansas (T19S R24W S2, Lafayette Wildlife Management Area at Lake Erling, Lafayette County, *Peck 94003,* LRU). The population was discovered by serendipity. The six above-ground stems were 10 cm tall, etiolated by shade, and sterile; two stems were stunted, browsed by deer. Only one stem was observed in March 1995. The population appears to be naturally occurring, probably the result of a long-distance colonization event, but may not be self-replicating.

The third Arkansas population was discovered by Carl Amason on January 7, 1995. While visiting the First National Bank of El Dorado, Union Co., he observed two dozen plants growing in two partially-shaded sidewalk planters that supported 2.5 m tall Yaupon holly bushes (*Amason* s.n., LRU). The plantings were established in 1984. The source greenhouse has never carried *Psilotum.* Therefore, it is most likely that the plants originated from the soil ball or filler mulch trucked northward to El Dorado. These plants are 5–8 cm tall, stout, and sterile. Rather than being etiolated, these plants have the stem thickness typical of greenhouse material; they grow in a narrow but sunny walkway that slopes southward. The plants occur on the side of the planter that receives run-off water. After being informed of the important natural heritage feature growing in their landscaping, the bank officers stopped a planned landscaping project that would have extripated the population. The uniformed security guards delight in showing off the plants to botanists and in protecting the plants from customers.—JAMES H. PECK, Department of Biology, University of Arkansas at Little Rock, Little Rock, AR 72204; JAMES R. BRAY, DANIEL L. MARSH, and DENNIS W. MCMASTERS, Department of Biology, Henderson State University, Arkadelphia, AR 71999; CARL AMASON, Calion, AR 71724, and WINFRED D. CRANK, Hot Springs, AR 71902.

Verification of Estimated Growth Rates in the Tree Fern *Alsophila salvinii*.—In a previous paper (Seiler, Amer. Fern J. 71:75–81, 1981), I investigated the frond demography and growth of *Alsophila salvinii* Hook. in Bosque Montecristo, a cloud forest in northern El Salvador. In that paper, I estimated the annual growth rate of the trunk using data collected during 1978–80. In July 1991, I revisited Bosque Montecristo and measured the actual growth of some of the trees used in the 1978-80 study. The actual growth rate was only about 75% of the original estimated rate.

In June 1978, I tied flagging tape to the bases of stipes on living fronds at the crown on 28 individuals of *A. salvinii.* In July 1991, I could locate 18 of the original 28 trees from the remnants of the flagging tape on them. Seventeen of the 18 trees were still alive. I determined the growth of the trees between June 1978 and July 1991 by measuring the distance between the flagging tape and the crown of the plant. The mean growth of the 17 living trees during that period was 66.1 cm; the 95% confidence interval for the growth rate is 5.1±0.8 cm/yr. The range is 2.3 to 7.7 cm/yr.

The published growth rate in my original paper is incorrect because of an arithmetic error in calculating the frond-production rate. Therefore, the growth rate is recalculated here. For the period from May 1979 to May 1980, the 95% confidence limits for the mean frond production rate are 2.5±0.8 fronds/yr (n = 10). In January 1979, I counted stipe bases in 50 cm sections of the apical part of the trunk on 10 trees; 95% confidence limits for the mean are 18.1±1.1 fronds per 50 cm. Thus, the growth rate calculated from the data collected in 1978–80 is: